WHAT IS CLAIMED IS:

1.   A cardiac harness configured to fit generally around a patient's heart and to resist expansion of the heart by applying a compressive force thereto, at least a section of said harness exerting a circumferential load, normalized with respect to a longitudinal direction and expressed in pounds per inch, as a function of circumferential expansion of said section of harness, expressed as a percent of expansion above a zero load condition, said harness having an operating range of expansion having a minimum value of at least 20 percent, wherein a change of 20 percent in said circumferential expansion within said operating range yields a change in circumferential load of no more than about 0.066 lb/in.

2.   The cardiac harness of Claim 1, wherein the section encompasses at least a substantial portion of the harness.

3.   The cardiac harness of Claim 1, wherein a change of 20 percent in said circumferential expansion within said operating range yields a change in circumferential load of no more than about 0.064 lb/in.

4.   The cardiac harness of Claim 1, wherein a change of 20 percent in said circumferential expansion within said operating range yields a change in circumferential load of no more than about 0.05 lb/in.

5.   The cardiac harness of Claim 1, wherein a change of 20 percent in said circumferential expansion within said operating range yields a change in circumferential load of no more than about 0.02 lb/in.

6.   The cardiac harness of Claim 1, wherein a change of 20 percent in said circumferential expansion within said operating range yields a change in circumferential load of no more than about 0.018 lb/in.

7.   The cardiac harness of Claim 1, wherein the operating range of expansion has a minimum value of at least about 25 percent.

8.   The cardiac harness of Claim 1, wherein the circumferential compliance of the harness over the operating range of expansion is greater than a longitudinal compliance of the harness.

9.   A cardiac harness configured to fit generally around a patient's heart and to resist expansion of the heart by applying a compressive force thereto, at least a section of said

harness exerting a circumferential load, normalized with respect to a longitudinal direction and expressed in pounds per inch, as a function of circumferential expansion of said section of harness, expressed as a percent of expansion above a zero load condition, the variation of load as a function of expansion through a selected range of expansion being generally in the form of y=ax+b where a and b are determined by linear regression, a first value of "a" corresponding to a first selected range of expansion of at least 5 percent, and a second value of "a" corresponding to a second selected range of expansion of at least 5 percent, the second range of expansion consisting of values greater than the first range of expansion so as to be non-overlapping with the first range, said second value of "a" being no greater than said first value of "a".

10. The cardiac harness of Claim 9, wherein the first and second ranges are substantially contiguous with one another.

11. The cardiac harness of Claim 9, wherein the first and second selected ranges of expansion are within an operational range of expansion of the harness of about 0-100 percent expansion.

12. The cardiac harness of Claim 11, wherein the first selected range of expansion is within a range between about 20 and 30 percent expansion.

13. The cardiac harness of Claim 12, wherein the second selected range of expansion is within a range between about 25 and 100 percent expansion.

14. The cardiac harness of Claim 12, wherein the second selected range of expansion is within a range between about 25 and 70 percent expansion.

15. The cardiac harness of Claim 12, wherein the second selected range of expansion is within a range between about 25 and 50 percent expansion.

16. The cardiac harness of Claim 15, wherein the second selected range of expansion is within a range between about 25 and 35 percent expansion.

17. The cardiac harness of Claim 15, wherein the second selected range of expansion is within a range between about 30 and 40 percent expansion.

18. The cardiac harness of Claim 15, wherein the second selected range of expansion is within a range between about 35 and 45 percent expansion.

19.   The cardiac harness of Claim 15, wherein the second selected range of expansion is within a range between about 40 and 50 percent expansion.

20.   The cardiac harness of Claim 9, wherein the first value of "a" is greater than the second value of "a".

21.   A cardiac harness configured to fit generally around a patient's heart and to resist expansion of the heart by applying a compressive force thereto, at least a section of said harness exerting a circumferential load, normalized with respect to a longitudinal direction and expressed in pounds per inch, as a function of circumferential expansion of said section of harness, expressed as a percent of expansion above a zero load condition, the variation of load as a function of expansion between 20 percent expansion and 30 percent expansion being generally in the form of $y=ax+b$ where "a" and "b" are determined by linear regression, said linear regression of said variation of load as a function of expansion yielding a coefficient of determination of at least about 0.8, the value of "a" being no greater than about 0.0033.

22.   The cardiac harness of Claim 21, wherein the value of "a" is no greater than about 0.0032.

23.   The cardiac harness of Claim 21, wherein the value of "a" is no greater than about 0.0025.

24.   The cardiac harness of Claim 21, wherein the value of "a" is no greater than about 0.002.

25.   The cardiac harness of Claim 21, wherein the value of "a" is no greater than about 0.001.

26.   The cardiac harness of Claim 21, wherein the value of "a" is no greater than about 0.0009.

27.   The cardiac harness of Claim 21, wherein the coefficient of determination is at least about 0.9.

28.   The cardiac harness of Claim 21, wherein the coefficient of determination is at least about 0.95.

29.   A cardiac harness configured to fit generally around a patient's heart and to resist expansion of the heart by applying a compressive force thereto, at least a section of said

harness exerting a circumferential load, normalized with respect to a longitudinal direction and expressed in pounds per inch, as a function of circumferential expansion of said section of harness, expressed as a percent of expansion above a zero load condition, the variation of load as a function of expansion through a selected range of expansion being generally in the form of $y=cx^2+ax+b$ where c, a and b are determined by linear regression, and c is negative.

30.   The cardiac harness of Claim 29, wherein the linear regression function has a coefficient of determination of at least about 0.9.

31.   The cardiac harness of Claim 29, wherein the linear regression function has a coefficient of determination of at least about 0.99.

32.   The cardiac harness of Claim 29, wherein the selected range of circumferential expansion is between about 0 and 100 percent.

33.   The cardiac harness of Claim 32, wherein the selected range of circumferential expansion is between about 20-50 percent.